

From the INTERNATIONAL BUREAU

PCTNOTIFICATION CONCERNING
SUBMISSION OR TRANSMITTAL
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

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| | |
|---|--|
| Date of mailing (day/month/year) 01 April 2005 (01.04.2005) | |
| Applicant's or agent's file reference NT1901PCT | IMPORTANT NOTIFICATION |
| International application No. PCT/JP05/000690 | International filing date (day/month/year) 20 January 2005 (20.01.2005) |
| International publication date (day/month/year) | Priority date (day/month/year) 23 January 2004 (23.01.2004) |
| Applicant HITACHI PLANT ENGINEERING & CONSTRUCTION CO., LTD. et al | |

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable)* The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- (If applicable)* An asterisk (*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as the priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

| <u>Priority date</u> | <u>Priority application No.</u> | <u>Country or regional Office or PCT receiving Office</u> | <u>Date of receipt of priority document</u> |
|------------------------------|---------------------------------|---|---|
| 23 January 2004 (23.01.2004) | 2004-016082 | JP | 17 March 2005 (17.03.2005) |

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PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

NT1901PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2005/000690

International filing date (day/month/year)

20.01.2005

Priority date (day/month/year)

23.01.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant

HITACHI PLANT ENGINEERING & CONSTRUCTION CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000690

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/000690

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☒ paid additional fees
- ☐ paid additional fees under protest
- ☐ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
- ☒ not complied with for the following reasons:

A part of the inventions of claims 1-6 and the inventions of claims 11 and 12 (invention group A) relates to a microorganism separating device comprising sample liquid separating means for stopping the supply of a sample liquid to a first flow passage based on the result of detection of a microorganism by a microorganism sensor and then discharging said detected microorganism from the end side of said first flow passage together with the sample liquid. A part of the inventions of claims 7-10 and the inventions of claims 11 and 12 (invention group B) relates a microorganism separating device, wherein a first flow passage and a second flow passage are connected through an orifice, and the passage of a microorganism through an orifice can be detected by a pair of electrodes placed in a first flow passage and a second flow passage, respectively.

The matter common in the invention group A and the invention group B relates to a microorganism separating device having sample supplying means, a first flow passage and a sensor capable of detecting a microorganism. However, the matter was well known before the date of priority of this application as described in JP, 9-145593, A, and therefore this common matter is not a special technical feature in the sense of the second paragraph of PCT Rule 13.2.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☒ all parts
- ☐ the parts relating to claims Nos. _____

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/000690

| Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
|---|--|-------------|-----|
| 1. Statement | | | |
| Novelty (N) | Claims | 1-12 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-6, 11, 12 | YES |
| | Claims | 7-10 | NO |
| Industrial applicability (IA) | Claims | 1-12 | YES |
| | Claims | | NO |
| 2. Citations and explanations: | | | |
| <p>Document 1: JP, 11-281564, A (Sysmex Corporation), 15 October, 1999 (15.10.99), full text (Family: none)</p> <p>Document 2: JP, 2001-305041, A (Sysmex Corporation), 31 October, 2001 (31.10.01), full text, & US, 2001/0032495, A1</p> <p>Document 3: JP, 9-145593, A (Nikon Corporation), 6 June, 1997 (06.06.97), full text (Family: none)</p> <p>Document 4: JP, 2000-74816, A (Nireco Corporation), 14 March, 2000 (14.03.00), full text (Family: none)</p> <p>Document 5: JP, 2003-284544, A (Aisin Seiki Co., Ltd.), 7 October, 2003 (07.10.03), full text (Family: none)</p> <p>Document 6: JP, 2003-274924, A (Jun Kikuchi), 30 September, 2003 (30.09.03), full text (Family: none)</p> <p>Document 7: A.Y. Fu et al., An integrated microfabricated cell sorter, Anal. Chem., 2002, Vol. 74, pages 2451-2457</p> <p>Document 8: A.Y. Fu et al., A microfabricated fluorescence-activated cell sorter, Nat. Biotechnol., 1999, Vol. 17, pages 1109-1111</p> <p>The subject matters of claims 7-10 do not appear to involve an inventive step in view of documents 1-8 cited in the ISR.</p> <p>Documents 1 and 2 are considered to describe a microorganism detecting device detecting the passage of a microorganism through an orifice using an electrode. Documents 3-8 are considered to describe a device separating microorganisms using various kinds of signals.</p> <p>Accordingly, a person skilled in the art could have easily conceived that a device separating microorganisms by detecting the passage of a microorganism through an orifice using an electrode is produced referring to the descriptions of documents 1-8. At this time, a person skilled in the art could have accordingly made a discharge port and the like suitable and made the positional relation between the electrode and the orifice suitable.</p> <p>The subject matters of claims 7-10 are not considered to exhibit a remarkable effect.</p> <p>The subject matters of claims 1-6, 11 and 12 are neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.</p> | | | |